



## **MODULAR PANEL SPECIFICATIONS FOR:**

### **INDUSTRIAL ENCLOSURES**

#### **GENERAL**

Environmental enclosures shall be constructed with prefabricated wall and ceiling panels formed to exact size as described below and manufactured by KPS Global, Fort Worth, TX.

#### **INSULATION**

Insulation shall be 100% rigid urethane with a conductivity factor (K factor) not to exceed 0.128 Btu/hr. Urethane is to be poured in place with a density of 2.2 pounds per cubic foot. Overall coefficient of heat transfer (U factor) and R value to be as follows:

	THICKNESS	"U" FACTOR	"R" VALUE
Walls	3-1/2"	.036	25
Tops	5"	.036	40

This insulation shall be a listed urethane with a rating of no more than 25 for flame spread and 450 for smoke developed per ASTM E84. This urethane will also meet the ignition properties requirements of ASTM D-1929.

#### **MODULAR PANEL CONSTRUCTION**

All panels to be constructed with die-formed interior and exterior metal pans securely fastened to a perimeter frame of kiln dried spruce-pine-fir (SPF) specie, #2 grade lumber. Perimeter frame to feature tongue and groove profile for positive alignment and sealing. Panel shall be filled with poured-in-place urethane, which securely bonds to metal pans and perimeter frame creating a rigid structural panel with a tough, resilient, shock-resisting surface. Standard panels shall be interchangeable for ease of assembly. Special panels shall be manufactured to the size required to obtain a specified building size.

## **PANEL FASTNERS**

Cam-lock fasteners shall provide a tight and positive seal. These fasteners reduce on-the-job installation time to a minimum. Fastener material shall be steel housing, hook and pin with high-pressure die-cast zinc cam. Hardened steel hexagonal wrench is provided to tighten panel fasteners. The hook of the fastener shall engage over the pin when rotating the wrench and with cam-action, draw the panels tightly together. Polyethylene snap-in caps cover the wrench holes. Lock spacing shall not exceed 46" on center.

## **PANEL GASKETS**

Each joint shall exhibit a polyvinyl chloride (PVC) bulb type; compression gasket to eliminate water vapor permeability. All gaskets are factory installed and require no additional handling. Gaskets shall be resistant to chemical corrosion and ultraviolet radiation. Gasket operating temperature shall be -34 degrees C to +71 degrees C (-30 degrees F to +160 degrees F).

## **Finishes**

Interior and exterior metal pans are:

### **Galvanized Steel:**

- KPS Global White - Interiors
- Tan Embossed 22 gauge - Exterior
- Polar White 22 gauge – Exterior
- Other Finishes upon request

## **COMPOSITE TESTING**

KPS Global has panels available that meet the requirements of the following:

- Flame spread and smoke developed per UL-723, ASTM E-84 and Chapter 26 of the International Building Code
- Ignition properties per ASTM D-1929
- UL 1715
- Miami-Dade County -South Florida Building Code
- City of Los Angeles-Municipal Building Code
- City of Houston-Houston Building Code
- City of New York-Material and Equipment Acceptance
- State of Oregon-Prefabricated Structures
- State of California-Licensed Manufacturer
- State of Wisconsin-Material Approval

## **REGULATIONS AND CODES**

All work and materials shall be in full accordance with local and/or state ordinances. KPS Global is not responsible for furnishing items required by the regulations, but not specified or shown on the drawings or contained in the specifications.

## **CAULKING & SEALANTS**

Insulated panels shall be set with galvanized base trim & flashing with non-drying butyl caulking. All openings and penetrations through insulated panels shall be sealed with silicone sealant. Clean and degrease applicable surfaces.

## **INSTALLATION INSTRUCTIONS**

A complete set of instructions covering assembly and maintenance shall be supplied.

## **ROOF SYSTEM**

A prefabricated roof system shall be provided for the enclosure to provide a waterproof covering for insulated ceiling panels.

Standard roof system shall be a single ply reinforced co-polymer alloy dielectrically welded into a single piece (up to 765 square feet). The membrane shall be resistive to ultra violet rays and caustic chemical. The roof is mechanically fastened with all fasteners concealed except those at the perimeter termination bar.

Alternate roof system shall be a 22 gauge galvanized metal standing seam with interlocking ribs at 16" centers in lengths up to 16'0". Metal pans are mechanically fastened to the industrial enclosure around the perimeter.